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ABSTRACT

The benefits of cooperative and/or active learning techniques for academic library instruction have been well established in the literature of the field. However, learning about and finding appropriate techniques can be a time-consuming and frustrating task. The following is a listing of cooperative learning and active learning techniques published in the library or educational literature between 1989 and 1997. Sources selected are viewed as being the most relevant for use in academic libraries. Each technique is identified with the author(s) of the source article(s); the list is followed by a bibliography of the materials cited. This list is intended as a finding tool, not as a definitive source of teaching techniques. Librarians and teachers interested in cooperative or active learning are strongly advised to read several of the articles cited, and, if possible, attend a course or seminar in the method and visit classrooms in which it is applied. Furthermore, the best techniques are often those created for the particular learning situation; librarians and other teachers should never restrict themselves only to what has been published. (Author)

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Index and Bibliography of Cooperative and Active Learning Techniques for use for Library Instruction, 1989-1997.

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The benefits of cooperative and/or active learning techniques for academic library instruction have been well established in the literature of the field. However, learning about and finding appropriate techniques can be a time-consuming and frustrating task. The following is a listing of cooperative learning and active learning techniques published in the library or educational literature between 1989 and 1997. Sources selected are viewed as being the most relevant for use in academic libraries. Each technique is identified with the author(s) of the source article(s), the list is followed by a bibliography of the materials cited.

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Cooperative Learning techniques

Openers

"The class is divided into four or five groups. Each group has five minutes to come up with a list of five questions about the library. At the end of five minutes each group shares it questions with the entire class." Other possible questions are: "How many of you have done an ERIC search before? Has anyone had trouble finding information they need in the library? An especially good opener is to ask students to summarize their library assignments." (Warnken-Young)

Brainstorming (both individual and small group)

"In brainstorming, the rules are to think of and jot down ideas as quickly as you can, to aim for a large quantity of ideas, and not to criticize ideas (your own or others)." Brainstorming may be guided by a question, for example: "To do a good paper on an education topic, what do you have to know about this library and about library resources in education?" (Ridgeway)

"Brainstorm with the class on a pre-determined term paper topic, approaching it from various perspectives (e.g., political, social, historical, psychological, statistical, ethical). Use these approaches to suggest certain library resources and research strategies." (Sheridan)

Learning About and Evaluating Sources

Students are given one (or more) scholarly and one popular article on the same subject, then given time to read or scan the articles and discuss the differences. (Warnken-Young) (Cook, Kunkel, Weaver) (Staines: "Scholarly Journals vs. Popular Magazines")

Prepare a set of four or five periodical articles on overheads, progressing from supermarket tabloid to a scholarly journal. Develop criteria to apply to articles. (Gremmels)

Pairs are assigned to find and compare articles from one of eight scholarly journals in the field of Middle East studies and/or political science with articles from *Newsweek* and *Foreign Affairs*. (Senecal - Fratantuano)

ERIC documents - "Titles and excerpts from several representative ERIC documents are provided on a handout. Students scan the titles, abstracts excerpts, and note fields, after which they write the *types* (not subjects) of material found in ERIC documents. In addition, we ask them to list three or more categories of people who would find ERIC documents useful." (Jacobson-Mark)

Periodicals - Students are given several types of periodicals to sort and categorize. For example, the periodicals could focus on scholarly research, trends and techniques, specific subjects, or professional organizations. (Mark-Jacobson)

Skills Stations - Small groups rotate through stations, set up around the library, learning a different source or skill at each one. They may look up the same topic at each station, and see what different sources tell about it. (Gremmels)

Types of Tools - Begin with separate stacks of "finding" tools (indexes) and "fact" tools (encyclopedias, handbooks, etc.) Challenge groups to classify sources, then discuss what the items in each stack have in common and how they might be useful. You may or may not offer the categories of "finding" and "fact". (Gremmels)

Small group examines a given reference source, then writes a paragraph on how to use it. (Ridgeway). Or, after a small group examines a given reference book, the group (or a selected speaker) makes a presentation for the class answering a set of questions about the source. (Staines, "Examining Reference Sources") Or, each group may do a different type of source, each representing a different step of the research process (encyclopedias, online catalog, indexes, etc). (Archer, "Student Self-Teaching")

"At the end of a period in a class on locating book reviews, divide the class into groups and ask each group to locate a popular and a scholarly book review in the book review sources you have brought with you. Check out each title in advance; choose examples that illustrate some of the difficulties of locating reviews." (Ridgeway)

"Small groups or individuals are given one or two research questions and asked to decide what reference books they would consult and in what order." (Ridgeway)

"As a lecture introduction, have students brainstorm to list types of primary and secondary sources of information. The lecture will then take each type and tell how to locate them through the library." (Ridgeway)

"Hand out an example of a bibliography that might be in a freshman term paper. The bibliography should have a few very good items, several old or irrelevant items, some nonscholarly sources, and overall should rate a D or F by your standards. Have students divide into group to grade the bibliography and list at least 4 reasons for the grade they assign." (Ridgeway)

Learning Search Strategy

The class first reads a newspaper story, then divides into groups. They identify all possible information sources used in the story; then the class brainstorms on these and other possible information sources. (Sheridan)

For an upper division class: give a research problem to the class before it comes to the library. In the library, the class works in pairs or triads for 10 to 20 minutes, then meet as a class to share findings. Be supportive, but also use each report as an opportunity to introduce additional sources and appropriate access points. (Sheridan)

Group of three uses online catalog to identify books with literary criticism on three different authors and retrieve the items from the shelves. Take turns at the keyboard. (Cook-Kunkel-Weaver)

After an appropriate introduction, small groups are each assigned one literary work and must find one periodical article and one book of criticism on that work. (Archer, "Literary Criticism")

Groups of two or three students are assigned a broad topic and given a worksheet. Students then search a series of sources beginning with general encyclopedias and ending with periodical indexes. Students identify keywords, relevant disciplines, and specialized indexes appropriate to their topic, and also focus the broad topic into something workable. (Whitmore) For a similar exercise designed for larger groups, see Archer, "Broad Topics".

"Working in small groups (and using a worksheet), students performed searches on the library's online system to locate citations to books and articles on predefined topics. Prior to the in-library

session, students were required to read a chapter in their textbook on library skills." (Dabbour)

After an appropriate introduction, pairs of students are assigned topics and allowed to search for several minutes. Both the teacher and librarians are present to help. Once each pair has found at least one relevant citation, the class as a whole discussed their approaches and their results. (Jafari and Stamatoplos)(Dyckman)

Five minutes of free writing on doing research in libraries, followed by 4-5 member groups making consensus on the same topic, followed by reports from each group and posting the reports on the blackboard and discussing them. This approach may leave time for a tour in a 50-minute session. (Mabry)

After a demonstration on search commands and strategies, groups can develop search strategies for electronic databases. (Drueke) (Ridgeway)

Understanding Indexing and Classification

"Give a brief overview of the Library of Congress classification system and how it is used in the library. Then, divide the class into groups and send them to browse in the collections, asking some to select a reference book and others a periodical or circulating book of their choice. During the "show-and-tell" session that follows, take the opportunity to add relevant information about the sources chosen and alternate ways to access them." (Sheridan)

Database indexing. "We distribute a one-page article from a news magazine and ask students to read it and circle terms that are possible subjects. Students are then divided into small groups; each group is asked to agree on three to six terms and to report them to the class. We then show the class which terms were chosen by the professional indexer and discuss why they may differ from the student-selected terms." (Mark-Jacobson)

OPAC indexing. "Groups of two or three receive two handouts: a photocopy of a book's title page with the table of contents and a "subject searching" page that includes a facsimile of the book's OPAC record, with blank lines where the Library of Congress (LC) subject headings normally appear. Students are asked to imagine that the title page represents the "ideal" book for their topic and, using the paper OPAC record, they write on the subject lines what they would type in the OPAC as a *subject* search to retrieve such a book." The instructor then writes their

suggestions on a transparency, then moves to the OPAC and inputs the student's "subject" terms. Success and failure, and the actual LC subject headings are discussed. (Jacobson-Mark)

Group is given a set of card catalog cards and asked to arrange them as they think they may appear in the catalog. Results are compared and correct rules are explained. (Warnken-Young)

After a presentation on locating subject headings in history or literature, have students individually or in groups make up subject headings for books that yield some representative examples. Hold up books and project copies of title pages on an overhead projector. (Ridgeway)

Other techniques

"Students discuss a problem or issue in a small group, record their conclusions and report to the class." Use open-ended questions. (Drueke)

Jigsaw: "In this technique, students study an issue or a problem in groups, each group working on a specific component of the issue for a set period of time, after which they piece the "jigsaw puzzle" together via group reports and class discussions." (Ragains) (Drueke) (Johnson, Johnson, and Smith)

Lecture Modifications - techniques which can be used before, during, and after a lecture presentations:

Introductory focused discussion pairs
Question & Answer pairs
Progress checks
Intermittent discussion pairs
Simultaneous explanation pairs
Read-and-explain pairs
Cooperative note-taking pairs
Closure focused discussion
Closure cooperative writing pairs
Closure note-taking pairs
Implementation assignment
"Book-ends" (before and after lecture exercises)
(Johnson, Johnson, and Smith)

Active Learning techniques

Learning About and Evaluating Reference Books

Students in an advertising class are given a choice of several demographic resources, such as the *County & City Data Book* or *The Lifestyle Market Analyst*. "Each student was asked to choose one book from the table. Students were given ten minutes to look through their chosen book and find at least one interesting piece of information for use in their project. Each student was then asked to report to the class, describing the book, the information found, and its application to their advertising campaign." (Drueke)

Individuals "read two entries from two different reference sources and then ...answer in writing questions designed to foster analysis of this information." (Senecal-Fratantuano)

"Ask them to evaluate how each source would help with a research topic selected from a list you have prepared " (Sheridan)

"Get list of student research topics before the class begins. Throughout the class ask students to help out their classmates by deciding on the best periodical index to use for some of their topics, what terms they would use to locate material on others, and the appropriateness of certain materials for others, etc." (Ridgeway)

Other techniques

Problem solving for topic selection - Students review their textbooks for topics, and submit proposals for research. These are transferred to a set of transparencies, and discussed as a class. The librarian or instructor poses several questions to help develop the topics. (Mark-Jacobson)

Human Boolean (works well with freshmen) "To illustrate the Boolean operator "AND," we ask, for example, all students with college ID cards to stand. Next, class members who have ID card "AND" a backpack are asked to remain standing. Three or four more qualifiers, or concepts, are added, with the last qualifier being having five dollars in cash with them...The "OR" operator is illustrated by listing items of clothing such as jeans, sweatshirts, etc., with each "OR" bringing more students to their feet. Similarly, "NOT" is portrayed as "all college students "NOT" males." (Jacobson-Mark)

Short writing exercises that can be used during a lecture:

-ask students the most important idea from the lecture
-students posing one question still uppermost in their minds
-paraphrasing a key paragraph in last week's reading
(Myers-Jones)

Keeping journals "To address both affective and cognitive aspects of learning, we require students to keep informal journals in which they chronicle their research progress and difficulties. The journals are read periodically by the teacher and/or librarian, who add their own comments and questions." (Mark-Jacobson) (Also see Myers-Jones)

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